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ABSTRACT

Noting that two-year college students view writing instruction with suspicion because they do not perceive a tangible link between developing writing skills and their post-graduate activities, a survey was conducted to distinguish between the functions and forms of graduates' writing and to explore writing performed in contexts other than work. Subjects were 600 graduates of either a large, public, three-campus community college or a small, religious affiliated single-campus institution, both in the Buffalo, New York, area. The survey probed respondents' perceptions of the nature and frequency of their writing and was developed in three formats: one each for on-the-job writing, educational writing, and at-home writing. Only one format of the survey was sent to each third of the sample, so that respondents would not confuse writing activities in one context with those in another. Results suggested that graduates perform a variety of writing activities in all three contexts studied. The data supported the hypothesis that writing is a pervasive life activity. There is evidence that many writing activities differ significantly in frequency depending on the context. The results also suggested that preparing students for the kind of writing performed at work, in school, and at home--regardless of their major programs--seems logical. More than four out of five graduates reporting on their academic writing cited educational experience as most helpful. (AEW)

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THE WRITING ACTIVITIES OF TWO-YEAR COLLEGE GRADUATES: IMPLICATIONS FOR WRITING PROGRAMS

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In recent years, there has been a growing research interest in the writing activities of college-educated persons once they have left school. (Faigley et al., 1981; Odell & Goswami, 1982; Ede & Lunsford, 1985) The resulting studies have helped in the restatement of some important truths--that writing is a life-long activity, and that writing skills are essential to a graduate's future intellectual growth and economic success. Surveys have indicated that college-educated persons from a variety of programs, including technical and business fields, do much writing at work and that writing skills are an important factor in hiring and promotion decisions. (Harwood, 1982; Stine & Skarzenski, 1979; Faigley et al, 1981; Anderson 1985) Forceful arguments have been made for writing as a tool that enhances learning (Emig, 1977; Newell, 1984), and therefore as a tool successful learners will use for a lifetime.

Investigations of post-graduate writing could influence American higher education in a couple of significant ways. They could call into question the current position of writing instruction in the colleges, the breadth and content of particular curricula, and the methods favored by writing instructors. For example, if studies strongly suggest that a graduate's major in college has little effect on the frequency with which he or she performs various writing tasks, then it might be concluded that writing instruction and practice is of as great importance to the engineering major as it is to the student enrolled in a humanities program.

As we carry on our thinking about how writing "in the world" might influence writing "in the academy", we must also concern ourselves with the intent and the design of such studies. Some of the conclusions they reach

may strike us as less benign than the one cited in the paragraph above. For instance, up to this point researchers have generally contented themselves with examining writing that is related to employment, while occasionally speculating that most post-graduate writing is of this kind. (Faigley et al., 1981; Harwood, 1982) Educators in the humanities might warily wonder if such a predilection in these studies doesn't place another weapon in the hands of "creeping vocationalism." (Bain, 1983, 18) Do college programs need another reason to increase their already virulent preoccupation with a student's future economic function? Will even required English courses have to start concerning themselves with "vocational" training? The best way to avoid having to answer such questions in the affirmative is to make sure we look into other contexts which might motivate or necessitate post-graduate writing. It's natural, when focusing almost exclusively on job-related writing, to begin assuming that such writing is the kind most frequently performed, most significant to the writers themselves, and therefore most likely to be practiced while in college. Faigley's team asked two sweeping questions--"What do you write off the job? How often?"--while interviewing subjects at their place of work. (Faigley & Miller, 1982, 562) Harwood asked respondents to identify the "frequency with which they had done particular kinds of writing at work or at home during the previous two weeks," and the preponderance of job-related writing may have obscured recall of any which took place in other contexts. (281) Neither study made any finer distinction than the negative "writing not done at work."

Yet present-day college students are more likely than ever, once they leave an institution, to pursue further undergraduate, graduate, or professional schooling. How much do we know about the nature and frequency of our students' future academic writing? What do we know of the writing that gets performed because of familial or social relationships, or because of an individual's private emotional and intellectual concerns? Is writing in these contexts less important to the individual because it does not help, in a direct way, to generate paychecks?

Perhaps nowhere are students more consistently viewed in economic terms than in the nation's two-year colleges, by both themselves and others. Pincus (1980) has complained that these schools often appear more interested in developing work-forces for specific industries than in educating individuals for all the potential futures they might encounter. (240) It is true that during the past 15 to 20 years "junior" colleges have been transformed from "feeder" schools for four-year institutions into job-training centers where the majority of students hope to gain positions in their fields of interest immediately upon completion of their programs of study. Courses designed to introduce students to cultural traditions or to develop intellectual rigor are generally in retreat. (Cohen & Brower, 1982) Two-year college students frequently view with suspicion any academic requirements which are not visibly linked to their perceptions of what their post-graduate activities will be. In the two-year colleges, "vocationalism" does not "creep"; it "strides," proud and ascendant. What better places to begin, then, when studying graduates' writing activities,

in order to inform the perceptions of students, faculty, and administrators?

So far, however, studies have generally focused on the writing of the "college-educated" and on that of alumni from four-year schools, where the current running towards work-related or service-oriented writing instruction may not be as fierce. This pattern of research might reflect what Murtha, Kaufman, and Warman (1982) have labeled a larger "neglect" of the two-year graduate population by scholars. "In otherwise sophisticated analyses, those who completed the associate degree, whether in the liberal arts or in career programs, are often inappropriately grouped with college dropouts who possess just 'some college' education." (46) Such a tendency, whether deliberate or inadvertent, exists despite the fact that two-year institutions have also been the fastest-growing segment of higher education over the last quarter-century, and now enroll approximately 38% of all college students in the United States, up from 18% in 1963. (Grant & Snyder, 1986, 111) Consciously investigating writing which is generated in contexts other than work, and examining the writing of two-year college alumni, are two steps which would broaden and enhance research into post-graduate writing behavior.

Another way research into post-graduate writing could influence higher education is by contributing to the already-initiated, and healthy, questioning of the primary responsibility assigned to English faculty for writing instruction. Within our institutions, English Departments have shouldered this burden since the early years of the century, mostly through

the conduct of required freshman-level courses, the content and purpose of which have been the cause of much disagreement. One survey of professional journal articles written between 1918 and 1972 found a wide variety of stated objectives for freshman composition and a lack of consensus as to which were most important. (Woodard, 1982) Historically, the primary dispute has been between those who viewed "freshman comp" as a "service" provided by the English department, one which supposedly prepared students to perform writing tasks in all courses, including those in their major area, and others who considered it a "unique English course," (Woodard, 264) with a frequent bias toward writing about literature. (Kitzhaber, 1962)

The Writing-across-the-Curriculum movement has sought to resolve this issue by challenging the assumed equation of writing with the subject of English. If writing is an essential learning tool, then any course within any discipline which does not have its students write could be considered pedagogically remiss. (Emig, 1977; Maimon, 1982) Consequently, writing ceases to be an activity endemic to English courses. It is found, at least ideally, in all courses. Moreover, some rhetoricians have argued that writing in specific disciplines can differ not just in content and purpose, but also in the conventions that govern such things as "lexicon... explicit citation and implicit knowledge...[and] knowledge and attitudes the text assumes the readers will have." (Bizzell, 1982, 231) It is unfair, therefore, to expect that English faculty trained to cope with the rhetorical demands of their own discipline should be primarily responsible for developing writers whose needs might be quite different from their own.

Such arguments are reminiscent of challenges made by turn-of-the-century educators to the notion that training in one discipline could be transferred to others, something claimed by classicists defending the traditional curriculum of that time. (Thorndike and Woodworth, 1901) Of further interest is one of the conclusions drawn by Scribner and Cole (1978) from their study of the Vai in Liberia--that "specific uses promote specific skills" in writing. (458)

Research into post-graduate writing divorces the activity still further from the subject of English, by forcing us to consider instruction not just in terms of academic applications within particular institutions, but also in terms of what students will be doing beyond college. It may strengthen interest in a cross-curricular approach, but only if study results provide more specific information about the rhetorical demands and "specific uses" encountered by graduates than has previously been the case with surveys. A recurring flaw has been the failure to clearly categorize the types of writing performed by graduates. More specifically, clear distinctions have not been made between the forms graduates' writing might take and the rhetorical situations which cause the writing. For example, Stine and Skarzenski (1979) asked employers of white-collar workers "what kinds of writing...your employees do most often". "Memos" and "letters" were a close first and second among the types most listed, with "short reports" coming in third. (15-16) The problem with these terms is that they characterize pieces of writing only as forms endemic to particular business or bureaucratic settings, in the same way that term papers are endemic to

academic institutions. They tell us little, if anything, about the writing's subject matter, or its intended audience, or its intended effect on the audience. Looking further down the list of types provided by Stine and Skarzenski's subjects, we find some pieces of writing characterized by what they do--instructions and procedures, proposals, progress reports, evaluations, job descriptions, promotional literature, summaries and abstracts, and environmental impact statements; while others are characterized by the physical form they take--long reports, speeches, outlines, in-house publications, and professional articles. (16) Faigley et al.'s (1981) respondents listed 14 different types of reports that they write, with some types hinting at the subject matter and intent, and others describing physical form.

Researchers have to ask themselves what kind of information would be most helpful to program and curriculum designers, and to instructors in the classrooms--information about the dominant forms graduates' writing takes in particular contexts, or about the rhetorical situations which spur writing in those contexts? As students, would we respond more readily to an assignment that begins with the command to write in a particular form, or to one that begins with the need to work a specific effect on a clearly defined audience?

DESIGN OF THE STUDY

To discover new and potentially useful information, a survey of two-year college alumni was devised which would distinguish between the

functions and forms of graduates' writing, and which would explore in some depth writing performed in contexts other than work. Self-administered questionnaires were selected as the primary data-gathering instrument, as they were the best tool for contacting a relatively large sample of alumni from two quite different kinds of Buffalo-area two-year colleges--a large, publicly-funded, three-campus community college and a small, private, single-campus institution administered by a religious order. Questionnaires would yield respondents' perceptions of the nature and frequency of their writing activities, and great care needed to be taken in drafting and field-testing the items to ensure those perceptions had some precision and applicability. Of primary concern was content validity, or the extent to which the questions were true to the information sought, and reliability, or the minimizing of the influence of irrelevant variables on the responses.

Content validity for questionnaires is established in two stages. The first involves defining the domain of the instrument. The second calls for submitting it "to a small group of experts in the field and soliciting their constructive criticism and input with respect to content selection." (Harty, 1979, 53) Drafts of our questionnaire were submitted to a professor of English Education and a professor of psychometrics, both affiliated with the State University of New York at Buffalo, to participants in a seminar on the development of research instruments, and to two-year college instructors and alumni participating in the pilot studies. Gradually, the instrument was whittled down to questions

concerning the frequency of writing produced using particular media; of collaborative writing; of writing of certain lengths; of writing meant to be read or presented orally; of writing meant for certain audiences; of writing which requires research and/or documentation; of writing which is brief or mechanical, such as completing forms or note-taking; of writing which performs particular functions; of writing in a personal or imaginative form, such as a diary or poem; and of writing which requires multiple drafts.

The majority of the questions were modeled after items in the National Survey of Secondary School Writing, developed by Applebee, Lehr, and Auten (1980). The Applebee instrument demonstrated that useful information about writing could be obtained from high school teachers who were most likely unversed in recent composing theory. Moreover, it showed that Britton et. al.'s (1975) categorizations of writing by function and audience could be used to more clearly distinguish in questionnaire items between types of writing. Consequently, we were able to compose questions which allowed non-academic respondents to reveal the extent to which their writing performed specific functions and addressed particular audiences. (See Figures 1 and 2)

Figure 1
QUESTION ON WRITING FUNCTIONS

To what extent does the writing you perform on-the-job (in your educational program, at-home) fulfill each of the following functions?

	Never	Occasionally	Frequently
Recording of an on-going experience	1	2	3
Reporting what happened	1	2	3
Summarizing--describing a recurring pattern of events or steps in a procedure	1	2	3
Analyzing--discussing a situation, problem or proposal	1	2	3
Theorizing--speculating on the causes or consequences of something	1	2	3
Persuading or regulating--attempting to convince, or giving rules which require compliance	1	2	3

Figure 2
AUDIENCE ITEMS

Question Stem:
To what extent is your writing meant to be read or heard by:

I. On-the-job Questionnaires:
Person(s) who possess expertise in your field?
Person(s) who <u>don't</u> possess expertise in your field?
Yourself?
Person(s) within your business or agency?
Person(s) outside your business or agency?

II. Educational Questionnaires:
Yourself?
An instructor?
Fellow students?
A general audience?

III. At-Home Questionnaires:
Yourself?
Those interested in the specific topic?
Family or friends?
A general audience?

To obtain detailed information about graduate writing in a variety of contexts, three forms of the questionnaire were developed--one for on-the-job writing, one for educational writing, and one for at-home writing. Items in all the questionnaires were generally similar, with only minimal and appropriate modifications made in some questions. Only one form was sent to each third of the sample, to ensure that respondents did not confuse their writing activities in one context with those of another. The "writing on-the-job" questionnaire announced it was "concerned with the kind of writing you perform as part of your employment," while the educational forms sought information about "writing you perform in your educational program," (if the respondent was currently enrolled in one) and the "at-home" forms inquired about "writing you do that is not directly related to performance of a job, or to any formal educational assignment." Writing itself was defined for the respondents as "any activity that included placing words on a surface, whether it be paper, card, or computer screen." This definition was meant to counteract the tendency among respondents in other studies to associate writing with the physical act of inscribing words on paper, which often results in underestimating the amount of writing done and the amount of time spent writing. (Faigley and Miller, 1982; Ede and Lunsford, 1985)

Concerns over response rate and reliability also contributed to the decision to split the sample and develop three forms of the instrument. An initial draft which included questions regarding all three writing contexts was nearly 8 pages in length. Sudman and Bradburn (1983) have observed

that "Mail questionnaires to the general population on relatively low salience topics can seldom exceed two to four pages and still obtain reasonable cooperation rates." (227) While the population for this study could be characterized as something other than "general," writing activities were judged to be possibly of low salience, meaning that many respondents may not assign them much personal importance. Creating three forms made each questionnaire slightly less than four pages in length.

The duration of time respondents were asked to remember was also considered an important element in improving the reliability of the instrument. Sudman and Bradburn (1983) suggest that subjects have difficulty recalling activities of low salience which have occurred more than two to four weeks in the past. (43) On the other hand, a researcher runs the risk of creating "telescoping" if the time frame is narrowed too much. Telescoping is the tendency of respondents to report behaviors as performed within the specified time frame even when they have actually been performed over a much longer period. It is most likely to occur when a behavior is judged by the respondent to be socially desirable. Our questionnaire asked respondents to report on writing activities during the last month or a "typical" month, a period long enough to reduce the telescoping tendency and yet short enough to ease recall.

Concern over reliability and content validity did not end with completion of design of the instrument. Interviews with three graduates from each of the two colleges were conducted following distribution and collection of the questionnaires, with the aim of discovering how ambiguity

in the items, respondents' idiosyncrasies, and the like may have influenced the data. The interviews also provided a glimpse at the universe of information about post-graduate writing which lies beyond the grasp of tightly-worded, closed-response questionnaires. Accurate interpretation required a sense of what was missing.

The questionnaires were mailed to 600 graduates randomly selected from alumni lists compiled at Villa Maria College (a private, single-campus institution with an enrollment which wavers between 700 and 800 students) and the Erie Community College North Campus (publicly funded, with an enrollment of over 6,000 students per semester). One hundred graduates from each college were mailed the On-the-Job form; 100 of each the Educational form; and 100 of each the At-Home form. The sample was further divided by year of graduation as illustrated in Table 1.

Table 1

DISTRIBUTION OF QUESTIONNAIRES

Total Sample=600

	E.C.C. graduates=300			Villa Maria graduates=300		
Year of Grad.	On-the Job	Educa-tional	At-Home	On-the Job	Educa-tional	At-Home
1984	16	16	16	16	16	16
1983	16	16	16	16	16	16
1982	16	16	16	16	16	16
1981	16	16	16	16	16	16
1980	16	16	16	16	16	16
1975-79	20	20	20	20	20	20
TOTALS	100	100	100	100	100	100

Three-and-a-half weeks after the first mailing, 225 of the questionnaires, or 37.5%, had been returned. Second and third mailings, another three weeks apart, yielded 96 more returns. A little more than two months after the survey was initiated, 321 questionnaires had been returned, and 40 had been undelivered for various reasons. The response rate for a net sample of 560 was 57.3%, which compares favorably with other mailed surveys of the writing of college graduates. Skelton (1978) received 257 questionnaires from a sample of 692 community college alumni

for a rate of 37.1%. Rader and Wunsch (1980) got back 27.5% of their questionnaires from a sample of business school graduates. Bataille (1982) reported returns of less than a third from a survey of 600 Iowa State University graduates.

A screening question on the first page of the "on-the-job" and "educational" forms reduced the number of fully-completed and usable questionnaires to 216. Of the 112 respondents to the Educational questionnaire, 28, or 25%, were currently enrolled in an academic program of some kind and therefore able to complete all four pages. Eighty-seven of the 98 who returned usable On-the-Job forms were presently employed and could complete the instrument.

Aside from the rich descriptive data yielded by the instrument, both the design of the survey and certain questionnaire items created independent variables which could be tested for dependency with the responses concerning frequencies of writing behavior. Chi-square tests were run to determine significant differences in responses dependent upon writing context, as well as upon a graduate's alma mater, type of associate degree received, and major program.

The responding graduates listed 37 major programs in which they participated while attending either Erie Community or Villa Maria College. Given the sample size, it would have been impossible to test for significant differences among all of these, using chi-square. Therefore, the 37 majors were merged into seven larger categories of programs--transfer, management, secretarial, engineering technology,

health-related, public service, and visual communications. The transfer majors--Liberal Arts or Liberal Arts and Science, Engineering Science, Fine Arts, Interior Design, and Music--were advertised as such by the colleges and granted either an Associate in Arts or an Associate in Science. The majors in the remaining six categories all granted an Associate in Applied Science. Another restriction on testing for significant differences by program was the number--28--of respondents who completed the Educational form. Since there would not be enough cases per cell to run chi-squares on their answers, tests for dependency by major were limited to responses from the At-Home and On-the-Job questionnaires.

Spearman correlation coefficients were used to test for significant relationships between writing behaviors and year of graduation, and for relationships between on-the-job behavioral responses and the length of time a graduate had been working for a particular employer.

MAJOR FINDINGS

The care taken to identify functions and intended audiences resulted in some intriguing descriptive data about graduates' writing. Perhaps the most important finding was the diversity of audiences and functions reported by the respondents within all contexts. In only one instance did more than half of those responding to a particular questionnaire form (the Educational) say they <u>never</u> performed a particular function ("recording of an on-going experience"). Among all other cases, the percentage of those reporting that they at least <u>occasionally</u> performed a particular function

in their writing ranged from 55.5% to 92.8% of the total. Frequency of a behavior was measured using a scale of Never--Occasionally--Frequently, with occasionally defined in the questionnaires as meaning one to four times in a typical month, and frequently as five or more times a month. (See Table 2.)

Intended audiences reported by graduates were as diverse as the tasks they said their writing performed. With the exception of "general" audiences for Educational and At-Home writing, the percentage of respondents who occasionally or frequently addressed their writing to the listed categories of readers or listeners did not drop below 68%. The proportion of job respondents who reported addressing specific audiences never dropped below 69% for any of the categories provided on the questionnaire. (See Table 3.)

The findings call into question the supposition that writing is primarily an activity performed at work. In fact, more questionnaire items were performed at least occasionally by a majority of the graduates answering the Educational and At-Home forms than was the case with those reporting on Job-related writing. At the same time, Job respondents were most likely to circle frequently (40.7% of the time), which suggests that a greater quantity of writing gets done while working than in any other situation. But the margin was hardly overwhelming. Eleven items were performed frequently by the majority of Job respondents; three more than the amount reported by Home respondents and six more than indicated by those answering the Educational form.

TABLE 2

FREQUENCY OF PERFORMANCE--FUNCTIONS OF WRITING
By Writing Context

Function	Never		Occ.		Freq.		Function	Never		Occ.		Freq.	
	#	%	#	%	#	%		#	%	#	%	#	%
RECORDING	63	29.8	76	35.7	74	34.7	ANALYZING	52	24.5	95	44.8	65	30.7
At-Home	29	29.0	45	45.0	26	26.0	At-Home	27	27.3	54	54.5	18	18.2
On-the-Job	18	21.2	23	27.1	44	51.8	On-the-Job	23	27.1	28	32.9	34	40.0
Educational	16	57.1	8	28.6	4	14.3	Educational	2	7.1	13	46.4	13	46.4
REPORTING	52	24.4	86	40.4	75	35.2	THEORIZING	80	37.7	88	41.5	44	20.8
At-Home	25	25.0	45	45.0	30	30.0	At-Home	42	42.4	43	43.4	14	14.1
On-the-Job	18	21.2	26	30.6	41	48.2	On-the-Job	34	40.0	29	34.1	22	25.9
Educational	9	32.1	15	53.6	4	14.3	Educational	4	14.3	16	57.1	8	28.6
SUMMARIZING	54	25.6	88	41.7	69	32.7	PERSUADING	88	41.7	82	38.9	41	19.4
At-Home	32	32.7	47	48.0	19	19.4	At-Home	44	44.4	44	44.4	11	11.1
On-the-Job	16	18.8	30	35.3	39	45.9	On-the-Job	36	42.9	21	25.0	27	32.1
Educational	6	21.4	11	39.3	11	39.3	Educational	8	28.6	17	60.7	3	10.7

#=Number of that response given. %=Percentage of all responses for that item.

TABLE 3
FREQUENCY OF INTENDED AUDIENCES
By Writing Context

Audience	Never		Occ.		Freq.		Audience	Never		Occ.		Freq.	
	#	%	#	%	#	%		#	%	#	%	#	%
YOURSELF	26	12.6	71	34.3	110	53.1	FAMILIAR	19	8.9	75	35.2	119	55.9
At-Home	10	10.2	38	38.8	50	51.0	At-Home (Fam. or friends)	9	9.0	40	40.0	51	51.0
On-the-Job	13	15.9	22	26.8	47	57.3	On-the-Job (Pers. w/in bus.)	3	3.5	22	25.6	61	70.9
Educational	3	11.1	11	40.7	13	48.1	Educational (Fellow students)	7	25.9	13	48.1	7	25.9
GENERAL	107	51.0	66	31.4	37	17.6	THOSE INT. IN TOPIC (Home)	32	31.7	48	47.5	21	20.8
At-Home	69	69.7	25	25.3	5	5.1	EXPERT (Job)	8	9.5	22	26.2	54	64.3
On-the-Job (Pers. outside bus.)	21	25.0	32	38.1	31	36.9	NOT EXPERT (Job)	26	31.0	36	42.9	22	26.2
Educational	17	63.0	9	33.3	1	3.7	INSTRUCTOR (Educ.)	2	7.1	8	28.6	18	64.3

#=Number of that response given.

%=Percentage of all responses for that item.

Moreover, the interviews revealed possible reasons for graduates' underreporting the frequency of various writing behaviors. It was suspected from the beginning of the study that the at-home context would be one respondents least associated with writing activity. One graduate expressed the conviction that certain instances of her at-home writing "can't count," even while admitting that she had underreported the amount of her writing on the questionnaire. Another graduate, who reported feeling apprehensive about writing since the third grade, told of keeping a daily account, while dieting, of her food consumption, the circumstances accompanying it, her moods, and her exercising. Yet she reported on her questionnaire that she never kept a journal, and indicated in the interview that she considered her dieting account to be less formal, and less difficult to produce, than she thought journals had to be.

Responses to the question on drafting behavior would appear to support a reader's "common sense." Of the six listed functions of writing, analyzing and persuading most often demanded the use of multiple drafts. Theorizing and summarizing were next, while recording and reporting were tied as the functions most likely to require just a single version. Considering all functions, job-related writing demanded the most use of multiple drafts. Imaginative writing clearly demanded a greater use of drafts than journal or diary writing; and more versions, for that matter, than any of the function categories.

There was also evidence of underreporting and confusion when it came to the question on drafts. Because this question included items also found in

the functions and forms questions, one could spot respondents who had circled answers which conflicted with those for the prior queries. The usual pattern was for the number circling dont' perform in the use of drafts question to be higher than the number who circled never for the same item in the functions question. For example, 14 more people said they didn't perform the theorizing function in the latter question than reported they never theorize in the former. The number of don't performs increased by ten for the analyzing function.

Again, the interviews were helpful in contributing possible explanations for this unreliability in participant responses. Several graduates may not have understood the process by which a writer works through "drafts" or "versions" of a single piece of writing.

"I usually, like, write it out once," one interviewed graduate said initially of her written products at work, "and then I type it, and that's it."

"Do you ever change it as you're typing it? Do you fix it up? Do you alter it?" the interviewer asked.

The respondent replied that she had someone proofread her material before she typed it, with the usual sequence being a rough draft followed by proofreading followed by the typed version. Her supervisor read the material at this stage, before initialing it. Sometimes he asked her to make changes in her text. In short, the respondent began a discussion of drafting behavior by assuming that most of her work-related writing was completed after one version, and concluded it with the following comment:

"You don't think that you're doing it that many times when you're doing it."

More than half (53.4%) of the graduates reported that they at least occasionally sought help when writing, with collaboration occuring most in work-related writing, and least in educational programs. However, the differences among the responses, when tested by context, were not statistically significant.

The Significance of Independent Variables

By far, the variable which appeared to be most closely related to the frequency of various behaviors was the context in which the writing took place. More than 60% of all chi-square tests for differences using the variable of writing context proved significant. There was a strong dependency between context and the frequency of functions of writing, of personal and imaginative forms of writing, of research and documentation, of lengths of writing, and of tools of writing. Table 4 illustrates how the behaviors just mentioned and the context in which they took place were significantly related.

There were also significant correlations between year of graduation and more than 20% of the questionnaire items. The greatest impact was on academic writing. Graduating class was significantly related to close to 35% of the educational items, and 80% of those correlations were negative, meaning that the frequency of performance decreased as the year of graduation grew more recent. More recent graduates performed five of the

TABLE 4

RELATIONSHIP BETWEEN CONTEXTS AND FREQUENCIES OF BEHAVIOR

Item	Significant Difference	Chi-Square df=4 CV=9.49	Context with Highest Frequency
FUNCTIONS			
Recording	Yes	26.4963	Job
Reporting	Yes	13.166	Job
Summarizing	Yes	15.6155	Job
Analyzing	Yes	18.4754	Education
Theorizing	Yes	11.6156	Education
Persuading	Yes	21.3577	Education
PERSONAL AND IMAGINATIVE FORMS			
Journal or Diary	Yes	9.96438	Home
Stories, Poems, or Plays	Yes	19.442	Home
RESEARCH AND DOCUMENTATION			
Research	Yes	17.7843	Education
Documentation	Yes	32.8928	Education
CERTAIN LENGTHS			
1-2 pages	No	2.58772	None
3-5 pages	Yes	10.5466	Education
6-10 pages	Yes	19.3508	Education
More than 10 pages	Yes	19.9949	Education
WRITING TOOLS			
Paper and pen or pencil	No	2.99036	None
Dictation	Yes	21.8699	Job
Typewriter	Yes	10.1078	Home (Tie) Education
Computer or Word Processor	Yes	16.777	Job
Visual Aid	Yes	22.213	Education

(Tests for significant differences have a probability of error of less than .05.)

df=degrees of freedom CV=Critical Value

six functions less frequently when writing in educational programs, and used fewer drafts when analyzing or making journal or diary entries. These same recent graduates also did less research, addressed fellow students and general audiences less frequently, and wrote lengthy papers less often. One explanation might be that earlier graduates were more likely to be in educational programs where the demand for the aforementioned writing behaviors is greater. More than half of those who graduated before 1982 and completed an educational form were enrolled in graduate or professional school. None of those who graduated in 1982 or afterward were enrolled in similar programs, while the great majority of them (15 of 17) were working towards a baccalaureate.

The reason behind a decrease in job-related collaborative writing, researching, and working through multiple drafts on the part of recent graduates cannot be so easily inferred. Perhaps the frequency of such activities increases on-the-job with the amount of experience a graduate has accumulated in his or her field, although none of these items correlated significantly with the length of time spent working for a particular employer.

It is important to note that type of degree received, major program, and graduating institution had little relationship to the responses given by the graduates. Fewer than 10% of the chi-square tests using these variables indicated significant statistical differences among graduates, with less than a .05 probability of error. There was a relationship between degree received and a few job-related and educational behaviors.

Associates in Applied Science were the least likely to use multiple drafts when reporting On-the-Job, as well as to address persons outside a business or agency. A far smaller percentage of Associates in Applied Science (11.8%) wrote for a general audience in their academic programs than was the case with Associates in Arts (100%) and Sciences (60%). Associates in Science were the most likely to research information for writing at work.

But it was the context in which writing took place, as we've said, which was the most significant variable. Among the contexts, there were significant differences in responses to all six function items, and to both the personal and imaginative forms of writing. Graduates completing the On-the-Job questionnaire reported a higher frequency of recording, reporting, and summarizing in their writing than was the case with respondents to the Educational and At-Home forms. Alumni enrolled in educational programs performed theorizing, analyzing, and persuading or regulating with the greatest frequency.

Approximately three-quarters of the Job respondents performed the functions of recording, reporting, summarizing, and analyzing at least occasionally in their writing. And the majority of those who did perform these functions did so frequently. Less, but still the majority, theorize and persuade or regulate at least occasionally when they write.

Analysis was the most frequently performed function in academic writing, followed by theorizing and summarizing. Almost 93% of the respondents said they did analysis and 46.4% reported performing the function frequently. More than seven out of ten answered that they seek to

persuade or regulate, but for the bulk of these respondents it was an occasional activity. Less than half the Educational writers answered that they ever recorded on-going experiences, although this was a frequent function of job-related writing. More than four out of every ten made at least occasional entries in a journal or diary and, if the testimony of the interviewed graduates is representative, those entries were usually made for the purposes of record-keeping and analysis.

On the other hand, it was when two-year graduates were not working and not doing school tasks that they were most likely to be engaged in personal and imaginative writing. Almost 60% of the Home respondents said they wrote in a journal or diary at least occasionally, and more than 30% said they produced stories, poems, or plays. They easily outdistanced their counterparts reporting on the other two contexts in regard to these categories.

The hardly startling link between the realm of the "personal" and At-Home writing could also be seen in responses to the audience items. More than half of the home respondents said they wrote for themselves and for family or friends frequently, and 91% said they addressed these audiences at least occasionally. In contrast, less than a third indicated they ever wrote for a general audience. In this way they resembled the Educational respondents, of whom only 37% reported ever writing for a general audience. The greatest amount of academic writing was aimed at instructors, with the next most frequent audiences being the writer herself and fellow students. (See Table 3.)

In terms of frequency, job-related writing addressed the most diverse audiences. A large majority of the job respondents reported addressing all the possible audiences listed on the questionnaire at least occasionally. Persons within a writer's business or agency and persons who possess expertise in the writer's field were the most common audiences. More than nine out of every ten graduates completing the On-the-Job form reported writing for these audiences at least occasionally. Almost 71% said they wrote frequently for in-house readers or listeners, and more than 64% said they frequently addressed persons with expertise. However, three-quarters of these respondents also reported writing for persons outside their business or agency, and 69% wrote for people without expertise in their field.

The frequencies of both research and documentation were significantly different among the contexts. That both of these activities were most common to Educational writers was, again, to be expected. However, the responses from the other contexts would appear to challenge any notion that academic settings were the only places where two-year college graduates would have to research and document when writing. Nearly three-quarters of the respondents in all contexts reported that they researched material for their writing, while specifying sources within writing was an activity reported by a substantial majority of those reporting on their job-related and educational activities. (See Table 5.)

The results were undoubtedly influenced by a decision to define the terms "research" and "documentation" broadly enough to free them from

TABLE 5
FREQUENCY OF RESEARCH AND DOCUMENTATION
By Writing Context

Item	Never		Occasionally		Frequently	
	#	%	#	%	#	%
RESEARCH	55	25.8	110	51.6	48	22.5
At-Home (Sources not at hand)	28	27.7	58	57.4	15	14.9
On-the-Job (Sources not at hand)	25	29.8	40	47.6	19	22.6
Educational (Using a library)	2	7.1	12	42.9	14	50.0
DOCUMENTATION	83	38.6	73	34.0	59	27.4
At-Home (Specific about source)	53	52.5	37	36.6	11	10.9
On-the-Job (Specific about source)	24	27.9	23	26.7	39	45.3
Educational (Notes or a biblio.)	6	21.4	13	46.4	9	32.1

#=Number of that response given.

%=Percentage of all responses for that item.

primarily academic connotations. Educational respondents were asked the extent to which their writing required "using a library or other sources of information," and "documenting sources of information by using notes or a bibliography or both." On the questionnaires for Job-related and Home writing, research was depicted as "gathering information from sources not immediately at hand" and documentation was characterized as "being specific about where you obtained your information."

In preparing their writing, almost 93% of those composing for school researched information and half said they did so frequently. Close to 80% indicated that they document sources through notes, a bibliography, or both at least occasionally. Looking at job-related behaviors, approximately seven out of ten graduates at least occasionally researched information when writing, and indicated specific sources in their writing. In fact, 45.3% of the studied job-holders frequently specified their sources.

Another way that two-year graduates enrolled in educational programs were distinct from their counterparts in the other two contexts was in the frequency of longer pieces of writing. Among On-the-Job respondents, 53.8% said they never write anything three-to-five pages in length, and those figures increased to 82.3% and 87.5% for lengths of six-to-ten pages and more than ten pages, respectively. The occurrence of lengthier writing was slightly higher in the Home context. Nevertheless, 73.6% of those respondents said they never wrote anything of six-to-ten pages, and the percentage went up to 87.5% for pieces of more than ten pages. On the other hand, the majority (77.7% and 59.6%) of Educational writers completed

writing of three-to-five and six-to-ten pages, and just slightly less than half indicated that they produce work of more than ten pages.

Graduates were also asked about the frequency with which they used certain writing tools. Not surprisingly, paper and pen or pencil was the most commonly reported medium, with only one graduate out of 216 circling the never response. Typewriters were next in frequency of use, followed by computers and word processors, visual aids, and dictation. With the exception of paper and pen or pencil, there were significant differences among the contexts in frequency of use of all the specified writing tools. Computers or word processors and dictation were most frequently used at work; visual aids were most common in educational settings; and typewriters among At-Home and Educational writers.

Contribution of Various Experiences and Courses

At the conclusion of all three forms of the instrument were questions seeking to discover which experiences and two-year college courses taught graduates the most about the writing they do currently. The respondents had four possible experiences from which to choose: "Two-year degree program from which you graduated"; "Other educational experiences"; "Work experiences"; and "Other experiences." The second question gave graduates a choice of three kinds of courses taken while two-year college students: "Composition or literature courses"; "Courses related to your major"; and "Other courses."

Two interviewed graduates reported having difficulties seeing the compatability between their experiences and the given responses. One

circled both Work experiences and Other experiences under the first question because "they both pertain...I've developed writing skills...from not just this job, but other experiences." This graduate also admitted to not having read the instruction that specified only one answer should be circled for each question. When two numbers were circled for the same item it was recorded for analysis as a "non-answer." In the survey results, the percentage of non-answers for the questions on experiences and courses was larger than it was for almost all the other items in the instrument.

Another interviewee circled Courses related to your major under the second question when she actually meant liberal arts requirements she had to take as part of her program, such as "Human Services, Developmental Psychology" and others. They weren't data processing courses (her major), but they weren't Composition or literature courses either, and perhaps Other courses wasn't an emphatic enough alternative to catch her notice.

With that in mind, the chi-square tests still yielded a familiar pattern. There was a clear relationship between the responses and writing context, and little indication of one with any of the other variables. More than three-quarters of the Educational (81.4%) and Home (75%) respondents said that educational experiences taught them the most about the writing they do. On the other hand, less than half of the Job respondents (48.8%) circled either of the educational experiences, and the greatest percentage (41.3%) circled the Work experiences item.

Job respondents also differed from their At-Home and Educational counterparts in responses to the question on the influence of two-year

courses. Slightly less than half (49.4%) of those reporting on Job-related writing said courses related to their major were most helpful, while only a quarter of the Home and Educational respondents said the same. The bulk of those graduates (55.9% and 60.7%, respectively) answered that composition or literature courses taught them the most about the writing they do.

DISCUSSION AND IMPLICATIONS

The results of this survey are intriguing enough to warrant larger and more diverse samplings of the writing of two-year college graduates. Even institutions and individuals with modest resources can afford to examine graduates' writing in some way. Given a carefully prepared instrument, an adequately maintained computer list of alumni addresses (usually in existence for fund-raising, anyway), and a reasonable expenditure on postage and labor, detailed reporting is obtainable.

The questionnaires developed for this study are a starting point, but further consultations with faculty and field testing of questions might yield more precise ways of measuring graduates' drafting behaviors and the contribution made by various experiences and academic courses to writing ability. Interviews and direct observations may provide more detailed information about writing processes generally, and could also prove an antidote to the under- and over-reporting of certain activities. Recent research using ethnographic techniques, discourse analysis, and interviews have provided insights into how social and organizational contexts might influence a writer's rhetorical choices. (Odell, 1985; Doheny-Farina, 1986)

Ede and Lunsford's (1985) study of group authorship among professionals used both self-administered questionnaires and case studies. They began by surveying 200 randomly selected members of six professional associations. Twelve members of each association who said they would be willing to participate further were then sent a "more open-ended and detailed questionnaire designed to more fully identify a spectrum of collaborative writing forms and strategies." (4) The final step was to conduct "on-site case studies with between four and six respondents who regularly write as part of a team or group." (5)

Conclusions

Given the limitations of sample and data, the findings of this survey of two-year college alumni still suggest that graduates perform a variety of writing activities in all three of the contexts studied--occupational, academic, and domestic. Both the questionnaire data and the interviews support the conclusion that writing is a pervasive life activity, sometimes to the extent that we do it without being much aware that we are doing it.

At the same time, there is statistical evidence that many writing activities differ significantly in frequency depending on the context. College faculty and administrators cannot assume that preparing students for the writing most common in one context necessarily prepares them for writing in all contexts. Preparing a student for the writing performed at work, in school, and at home, regardless of his or her intended degree, major program, and institution, does seem logical, since those variables appear to have little effect on writing after graduation.

It can be argued that all graduates will do At-Home writing with varying degrees of frequency. Most will have jobs at any given point in time and will write while working. Fewer will pursue further education, but the number who do cannot be ignored. One-quarter of a randomly selected set of respondents, graduates from the years 1975 to 1984, reported being enrolled in an academic program at the moment the survey was taken. Another 43 of the Job and Home respondents reported having degrees beyond an Associates. Therefore, we can be certain that 71 out of 216 graduates completing the entire questionnaire, or nearly 33%, attended school after two-year college.

Others in the sample probably had further academic experience which did not appear in the numbers because of the study's design. (The question about highest degree attained came at the end of the questionnaire.) One Job respondent who completed only the first-page items voluntarily added that he or she was not currently employed because of involvement with schooling. Three Educational respondents reported that they had completed a Bachelors program but were no longer enrolled and therefore could not complete the questionnaire.[1]

Not surprisingly, more than four out of five graduates reporting on their academic writing said "educational experiences" were the most helpful to them. Over 60% said "composition or literature" were the most helpful two-year college courses. For these people, it appears, Freshman English functioned as an introduction to the kinds of writing demanded in higher education, and helped them in developing the ability to research, analyze, summarize, and theorize.

On the other hand, "work experiences" and "major-related courses" were the most frequently chosen items among graduates reporting on their job-related writing. Across all contexts, 69 out of 216 graduates reported "major-related courses" to be most helpful, as opposed to 97 who selected "composition or literature." Alumni who circled major courses may have done so because it was in them that they were introduced to the subject matter that now dominates their discourse. Another possibility is that such material makes writing demands that can be best practiced within those courses.

If the latter is the case, then content-area instructors need to be encouraged to pay close attention to the amount of writing done and the role writing plays in their courses. Such encouragement, it can also be argued, should extend beyond the occasional "writing-across-the-curriculum" workshop or "consciousness-raising" session. It could be on-going, structured, and supported by an institution's administration. Given release time, faculty who have experience teaching writing and who have kept up with recent theory, research, and practice involving writing instruction, could serve as in-house consultants, aiding interested colleagues. Perhaps interdisciplinary courses could be developed which teach content primarily through writing. A variation on that idea might be a second-year Advanced Composition course, conducted by a writing teacher, but working through a major paper developed by the student and his or her program advisor.

The main point is that both theories of learning and studies of post-graduate writing caution against placing too much of the burden for writing instruction on mandated English courses. Such courses may impart much that has general application. But that is not the same as saying that once they are taught, the institution has given students writing practice sufficient to meet their post-graduate needs. Moreover, major-related writing tasks need to be as diverse in the rhetorical demands they make as the reported behaviors of graduates were. The portion of this study's respondents who said they performed each of the six listed writing functions while working ranged from 57.1% (theorizing) to 81.2% (summarizing). That was in any given month, and there were no significant differences in frequency dependent upon program category or degree received. The readership for work-related writing was equally diverse and, again, major and degree appeared to have little effect.

The study's willingness to look beyond occupational activities, and the information that shift in perspective brought out, should encourage even more hard thinking about writing opportunities and writing instruction at the two-year level. There is a life outside of work, and that life includes writing. Many graduates reported performing personal, reflective, and creative writing, particularly when free from occupational and academic concerns. Nearly six out of every ten At-Home respondents reported keeping a journal or diary; more than 30% said they wrote stories, poems, or plays. Yet many realities in two-year colleges conspire against writing which allows students to explore themselves, their private worlds, their value

systems, and their cultures--student vocational concerns, degree requirements so tight that electives are not a possibility, interdepartmental rivalries, institutional rigidity. Would the opportunity to take a single three-hour English elective in creative writing seriously disrupt a student's program, even if the major was in engineering or word processing or nursing? Could required core courses in the liberal arts make more room for these kinds of composing?

NOTES

1. If the drawing of statistical inferences and the consequent need for randomization are not essential to a study, then one difficulty with this study--that 95 of 311 returned and usable questionnaires were only one-quarter completed--could be avoided. Alumni could be screened and sent questionnaires on work-related or academic writing only when they were appropriate to them. Another solution would be to add a page-one question asking recipients of On-the-Job questionnaires if they were presently enrolled in an educational program, and recipients of an Educational form if they were presently employed. A second and more appropriate form of the questionnaire could be sent at the second mailing to respondents unable to complete the one they received first.

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